For Immediate Release

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GRC Deploys Liquid Immersion Cooling to One of the Nation's Most Powerful University Supercomputers

With the installation of the ICEraQ® Series10, the new Lonestar Supercomputer will be highly efficient and provide the cooling capacity for a system with a power density of 70 kilowatts per rack that is capable of performing at 3 petaFLOPS per second

AUSTIN, TX – January 31, 2022 – GRC (Green Revolution Cooling®), the leader in single-phase liquid immersion cooling for data centers, today announced that it is providing the cooling infrastructure for a CPU-intensive computing system for the Lonestar6 supercomputer at the Texas Advanced Computing Center (TACC).

Building off a nearly twelve-year relationship that includes cooling the GPU-intensive subsystem of their Frontera supercomputer — the 13th fastest supercomputer in the world — GRC's ICEraQ Series 10 will provide the necessary cooling for a large part of the Lonestar6 supercomputer. Collaborating with partners Dell Technologies and Intel, Inc., GRC's Series 10 will provide the cooling infrastructure for the Dell C6525 servers containing AMD EPYC™ CPUs. Lonestar6 is one of the top 10 fastest supercomputers at a U.S. university and three times more powerful than the Lonestar5 system it replaced.

TACC and GRC first partnered in 2009, when the two organizations validated the cost-effectiveness of liquid immersion cooling in both energy and operations. This latest deployment for the research powerhouse will host a 280 kW system, which has a reduction in server power of 10 percent from fan removal, and 2 percent cooling power overhead for the immersion system, yielding a pPUE of 1.02.

"We're excited to be deploying GRC's latest liquid immersion cooling technology," said Tommy Minyard, Director of Advanced Computing Systems at TACC. "We have had a long partnership with GRC and we look forward to building off all of our successes by utilizing the Series 10 to power the new Lonestar6 supercomputer, enabling TACC to continue to be at the forefront of scientific research. In addition to providing the cooling capacity necessary, we will continue to reduce our facility's carbon footprint through the use of liquid immersion cooling."

Lonestar6 will enable researchers and scientists to conduct compute-intensive research utilizing a system that is at the cutting edge of science and engineering. Lonestar6 is dedicated to academic researchers throughout Texas and will serve as the main high performance computing resources for the University of Texas Research Cyberinfrastucture (UTRC) initiative.

“GRC values its longstanding partnership with TACC, and we’re delighted to once again provide the necessary cooling infrastructure to help power the important research being conducted by scientists and researchers across the state of Texas,” said Peter Poulin, CEO, GRC. “The deployment of the ICEraQ Series 10 will provide Lonestar6 with a highly efficient cooling infrastructure, enabling a consistent thermal environment while reducing the amount of cooling energy.”

Earlier this year, GRC secured the Data Centre World Innovation Product of the Year Award. The award recognizes GRC’s patented ICEraQ Series 10 immersion cooling system for its effectiveness in solving the problem of increasing heat loads in data centers and as a technology-based product aimed toward providing a brighter future.

The Series 10 immersion cooling system is a modular design which allows units to be positioned end-to-end, saving even more floorspace. It features an integrated containment area, eliminating the need for external containment decks; and is designed to optimize floor space utilization, allowing for the greatest number of racks without a walkway. CDU capacity has increased to 200 kilowatts with warm water and up to 368 kilowatts with chilled water, as well as the potential for at least a 50% larger brazed plate heat exchanger for even higher power future applications.

About GRC
GRC is The Immersion Cooling Authority®. The company's patented immersion-cooling technology radically simplifies deployment of data center cooling infrastructure. By eliminating the need for chillers, CRACs, air handlers, humidity controls, and other conventional cooling components, enterprises reduce their data center design, build, energy, and maintenance costs. GRC’s solutions are deployed in twenty countries and are ideal for next-gen applications platforms, including artificial intelligence, blockchain, HPC, 5G, and other edge computing and core applications. Their systems are environmentally resilient, sustainable, and space saving, making it possible to deploy them in virtually any location with minimal lead time. Visit http://grcooling.com for more information.

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